



## Tracking SARS-CoV-2 Variants

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All viruses, including the COVID-19-causing SARS-CoV-2 virus, evolve over time. Most modifications have little to no effect on the virus's characteristics. However, some modifications could have an impact on the virus's characteristics, including how quickly it spreads, the severity of the accompanying sickness, or the effectiveness of vaccines, therapeutic drugs, diagnostic devices, or other public health and societal interventions.

WHO has been tracking and evaluating the development of SARS-CoV-2 since January 2020 in conjunction with partners, specialist networks, national authorities, institutions, and researchers. Late in 2020, new variants that elevated the danger to public health globally prompted the characterization of certain Variants of Interest (VOIs) and Variants of Concern (VOCs), in order to prioritise global monitoring and research, and eventually to guide the on-going response to the COVID-19 pandemic.

The WHO's current recommendations for tactics and precautions continue to be effective against viral variances discovered since the pandemic began. Evidence from numerous nations with widespread VOC transmission has shown that public health and social interventions, such as infection prevention and control (IPC) strategies, have been successful in lowering the number of COVID-19 cases, hospitalisations, and fatalities.

Omicron is currently the main variant spreading globally, accounting for >98% of viral sequences published after February 2022, while Delta reached over 90% of all viral sequences by October 2021. Significant intra-VOC development has resulted from the continued transmission of these VOCs. The Omicron complexes

of viruses have continued to evolve since being classified as a VOC by the WHO on November 26, 2021, resulting in progeny lineages with diverse genetic makeup.

In order to inform public health authorities around the world of which VOC lineages may need priority attention and monitoring, WHO has added a new category to its variant tracking system called "Omicron sub variants under monitoring" in light of the widespread transmission of the Omicron VOC throughout the world and the expected ensuing increase in viral diversity. The primary goal of this category is to determine whether these lineages present a greater threat to public health than other viruses currently in circulation. WHO assign each of these lineages a separate WHO label if it is determined that they each differ significantly from the original VOCs to which they belong.

Global dominance continues to rest with BA.5 and its offspring lineages. They represented 68.1% of all sequences. The prevalence of BA.2 and its progeny lineages is increasing. The prevalence of BA.4 and its offspring lineages was steady as well. Currently, WHO is intensively monitoring four Omicron descendant lineages. These variants are included due to signals favouring transmission compared to other circulating variants, as well as extra amino acid modifications that may favour fitness. The sub variants being monitored include BA.2.75\* (including BA.2.75.2 and CH.1.1), BQ.1\* (and BQ.1.1), BF.7, and XBB\* (with XBB.1.5).

More nations have reported an increase in the prevalence of XBB.1.5 compared to early January 2023 when WHO published the first quick risk assessment of XBB.1.5. According to reports from the

United States of America, the United Kingdom, and the European Centre for Disease Prevention and Control (ECDC) evaluating XBB.1.5 across a number of countries in Europe, the XBB.1.5 variant has a growth advantage compared to other circulating Omicron descendent lineages. In spite of the fact that neutralisation was restored by a bivalent booster, preliminary laboratory-based antibody escape tests show that XBB.1.5 had higher immunological escape than Omicron descendent lineages prior to XBB in patients who received three doses of the mRNA vaccine. Studies on the efficacy of vaccines are still needed to corroborate these findings. No early indication of a rise in severity has been noted in reports from numerous nations, but since there are currently few instances linked to XBB.1.5, it is difficult to judge severity.

As of 22 January 2023, over 664 million confirmed cases of COVID-19 and over 6.7 million deaths have been reported globally. To put an end to the COVID-19 pandemic swiftly and fairly, the world needs concerted international measures. A vaccination-plus approach that combines widespread immunisation, accessible and affordable testing, treatment for fresh infections and long-term COVID (test and treat), supplemental public health and social measures, promotion of safe workplaces, and financial and social support for self-isolation, should be maintained by nations. It is preferable to undertake a vaccination-plus strategy with the aim of protecting populations on a long-term basis as opposed to doing so in a reactive manner.